

## REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated February 20, 2007 and the telephone interview conducted with the Examiner on May 3, 2007. Applicants thank the Examiner for taking the time to conduct the telephone interview.

In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due consideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

### Interview Summary

The Examiner indicted that the proposed claim amendments appear to overcome the outstanding §101 rejection. However, she will conduct a prior art search to ensure the claims are in condition for allowance.

### Status of the Claims

Claims 1-15 are under consideration in this application. Claims 1, 3, 5-6 and 8 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim Applicants' invention.

The claims are being amended to correct formal errors and/or to better recite or describe the features of the present invention as claimed. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

### Formality Rejection

Claims 1-15 were again rejected under 35 U.S.C. § 101 because these claims are directed to non-statutory subject matter, especially for not reciting any specifics.

Applicants contend that the recitation of "displaying said function group of biopolymers in the separate display window thereby confirming by the user that said function group in the selected subtree shares said one of functional characteristics consisting of enzymatic, metabolic, transporting, and cell cycle functions ("This displaying method allows a supposition that genes belonging to the same cluster may possibly share common functional characteristics." p. 3, lines 6-8; "whether the grouping was successful or not is confirmed by focusing on the functions of genes or keywords derived from gene names to see whether relative genes are assembled in a subtree." p. 4, last paragraph)" are a specific outcome of

each independent claim to provide physical transformation of an image presented to a user as the final result (p.3, 2<sup>nd</sup> paragraph of the outstanding office action).” Therefore, the claims provide a practical application of the invention in the technological art of gene expression analysis under the New Interim Guidelines in MPEP 2106. As such, each of the claims, as a whole, produces a specific outcome of displaying/confirming functional interrelationships.

For example, as now recited in claims 1 & 8, The invention (1) displays the selected subtree in the dendrogram in a separate display window thereby allowing a user to see in the separate display window more details of the selected subtree, (2) groups biopolymers in the selected subtree in the separate display window into at least one function group sharing one of functional characteristics consisting of enzymatic, metabolic, transporting, and cell cycle functions; and (3) displays said function group of biopolymers in the separate display window thereby confirming by the user that said function group in the selected subtree shares said one of functional characteristics consisting of enzymatic, metabolic, transporting, and cell cycle functions. The (3) step allow a user to confirm whether the grouping was successful or not, i.e., whether the group of biopolymers are correctly identified as a “*real world*” functional group thus providing “*a specific, substantial, and creditable utility.*” The identification and confirmation of the biopolymers as a “*real world*” functional group constitutes a “concrete, tangible and useful (*see AT&T, 172 F.3d at 1358, 50 USPQ2d at 1452*)” result so that the programs/systems as now claimed are statutory program/system claims.

Claim 3 replaces “the selected subtree in the dendrogram with an icon thereby *displaying the dendrogram with the icon as a simplified presentation rather than with the selected subtree,*”, which visually allows one skilled in the art to “*observe a global state of the dendrogram* (p. 8, lines 16-17),” thereby facilitating the “confirmation by the user that said function group in the selected subtree shares said one of functional characteristics consisting of enzymatic, metabolic, transporting, and cell cycle functions”.

Claims 5-6 display “the highlighted keywords together with said function group of biopolymers thereby *confirming biopolymers sharing said one of said functional characteristics are grouped in the selected subtree* (p. 5, lines 20-23)”, which visually allows one skilled in the art to “*determine which function or keyword should be focused on* (p. 5, lines 1-4),” thereby facilitating the “confirmation by the user that said function group in the selected subtree shares said one of functional characteristics consisting of enzymatic, metabolic, transporting, and cell cycle functions”.

Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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